

CLAIMS

What is claimed is:

1. A paper cassette for an image forming apparatus comprising:
a cassette body having a knock-up plate on which paper is stackable;
a pair of aligning plates disposed on the cassette body and movable in a widthwise direction, aligning in the widthwise direction the paper stacked on the knock-up plate ;
paper separating fingers disposed on the aligning plates and vertically movable through a predetermined distance above the aligning plates, pressing against corners of a leading edge of an uppermost sheet of paper stacked on the knock-up plate; and
a biasing member connected to at least a side of one of the paper separating fingers, increasing a relative downward pressure exerted by the paper separating finger on the uppermost sheet of paper stacked on the knock up plate.
2. The paper cassette of claim 1, wherein the biasing member is a spring having an end connected to an aligning plate and another end connected to at least a side of the one paper separating finger.
3. The paper cassette of claim 1, wherein the biasing member is a weight connected to at least a side of the one separating finger.
4. The paper cassette of claim 1, wherein at least one paper separating finger is provided with a friction pad.
5. The paper cassette of claim 1, further comprising an aligning lever disposed on the knock-up plate and moving in a lengthwise direction, aligning in the lengthwise direction the paper stacked on the knock-up plate.
6. The paper cassette of claim 1, further comprising a biasing member or biasing members respectively biasing each paper separating finger toward the paper to increase the relative downward pressure exerted on the uppermost sheet of the paper.

7. The paper cassette of claim 4, wherein the at least one friction pad is provided on a side of the at least one paper separating finger opposite of a side from which the paper is stacked so as to contact a side of a sheet of paper picked up from the knock-up plate.

8. The paper cassette of claim 1, wherein the paper separating finger biased by the biasing member has a pressing portion at a paper contacting end and pivots about an axis substantially at an end distal to the paper contacting end.

9. The paper cassette of claim 8, wherein the aligning plate to which the paper separating finger biased by the biasing member is pivotably connected has a stop pin and the biased paper separating finger has a hole configured to receive the stop pin and allow limited pivotable travel of the paper separating finger.

10. A paper separator for use in a paper cassette, having a base plate which supports paper in the cassette and an alignment plate which aligns the paper, comprising:
a body pivotably connected to a side of the alignment plate and pivotable between a first position and a second position about a pivot point located substantially at a pivot end of the body;
a pressing portion connected to the body at a pressing end opposite the pivot end;
a travel limiter disposed between the pivot end and the pressing end, which limits the pivotable travel of the body to between the first position and the second position; and
a biasing unit disposed between the travel limiter and the pivot end which urges the body,
wherein at least a portion of the base plate is urged substantially upwardly and the biasing unit urges the body substantially downwardly.

11. The paper separator of claim 10, wherein the biasing unit is a spring attached at one end to a side of the body and at another end to the aligning plate.

12. The paper separator of claim 10, wherein the biasing unit is a weight connected to a side of the body.

13. The paper separator of claim 10, wherein a stop pin extends from each of the alignment plates and the travel limiter comprises a hole that receives the stop pin and has at least one of a diameter and a linear direction greater than that of the stop pin so as to define ends of a range of travel of the paper separating fingers.

14. A paper cassette having a cassette body, the paper cassette comprising:
a support plate movably disposed within the cassette body and on which paper is stackable;
a pair of aligning plates disposed on opposing sides of the cassette body and movable in a widthwise direction to align paper stacked on the support plate in the widthwise direction;
paper separating fingers pivotably disposed on the aligning plates, an end of each of the paper separating fingers movable through a range of travel and pressable against a corner of a leading edge of an uppermost sheet of paper stacked on the support plate; and
a biasing unit connected to at least a side of one of the paper separating fingers, increasing a relative downward pressure exerted by the paper separating finger on the uppermost sheet of paper stacked on the knock up plate.

15. The paper separator of claim 14, wherein the biasing unit is a spring attached at one end to a side of the cassette body and another end to the paper separating finger.

16. The paper separator of claim 14, wherein the biasing unit is a weight connected to a side of the cassette body.

17. The paper separator of claim 14, further comprising:
a stop pin extending from each of the alignment plates and the travel limiter comprises a hole that receives the stop pin and has at least one of a diameter and a linear direction greater than that of the stop pin so as to define ends of a range of travel of the paper separating fingers.